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July 23, 2001

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
445 12th Street, SW, Room TW-A325
Washington, DC 20554

RE: Cingular Wireless LLC Request for Waiver of Sections 20.18(e)-(h) of the
Commission's Rules, CC Docket No. 94-102; DA 98-2631 **EX PARTE**

Dear Ms. Salas:

This is to inform you that on July 19, 2001, Brian Fontes, Jim Bugel and Ben Almond of Cingular Wireless met with Peter Tenhula, Senior Legal Advisor of Chairman Michael K. Powell's office to discuss issues related to the above referenced subject.

The discussion centered on details involved with Cingular's Waiver Petition to deploy Phase II location technology in its GSM and TDMA markets. The details are contained in the attached document which has been previously submitted for the record.

In addition, it was briefly mentioned that Cingular has been in contact with public safety officials of NENA and APCO in terms of discussing general Phase II implementation issues including Cingular's Waiver Petition.

Please associate this notification and accompanying material with the referenced proceeding.

Sincerely,

A handwritten signature in black ink, appearing to read "Ben G. Almond".

Ben G. Almond
Vice President-Federal Regulatory Affairs

Attachment

Cc: Peter Tenhula

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List ABCDE

July 19, 2001

**Cingular Wireless
CC Docket 94-102
E-911, Phase II Deployment, Waiver Petition**

Cingular seeks a waiver to deploy Phase II location technologies:

- (1) Enhanced Observed Time Difference (E-OTD) – GSM markets
- (2) Switch-based location technology – TDMA markets

E-OTD

- E-OTD is currently the only viable solution for GSM air interface.
- A-GPS handsets will not be timely available.
- Other GSM carriers will likely deploy E-OTD which facilitates roaming.
- Network-based solutions not available.
- E-OTD accuracy capability:
 - 100 meters/67% calls
 - 300 meters/95% calls
- FCC handset accuracy requirement is:
 - 50 meters/67% calls
 - 150 meters/95% calls
- E-OTD vendors appear committed to continue software refinements for accuracy improvements.

Cingular Wireless

Cingular's E-OTD handset deployment – new subscribers:

- One entry-level handset model will be available by October 1, 2001;
- 25% of all handsets sold by December 31, 2001;
- 40% of all handsets sold by March 31, 2002;
- 65% of all handsets sold by June 30, 2002;
- 100% of all handsets sold by September 30, 2002.

These activation rates exceed the FCC's handset activation requirements.

Cingular will deploy "safety net" solution for embedded GSM base.

"Safety Net" deployment schedule:

- 1st quarter 2002 (start)
- 2nd quarter 2002 (completion)

Radial Accuracy:

- 1000 meters/67% calls

E-OTD solution requires switch software/hardware upgrades. Switch upgrade deployment schedule:

Ericsson switches --

- 1st quarter 2002 (start)
- 12/2002 (completion)

Nortel switches --

- 5/2002 (start)
- 12/2002 (completion)

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Cingular applied similar cost/benefit approach to decide location technology choice for its TDMA markets.

I. Handset-based solution not available for TDMA

II. Extensive Field Trial Analysis – TDMA

Network-based solutions:

TDOA

TDOA/AOA

RF Mapping

Tests conducted in various indoor/outdoor environments, various urban, suburban and rural type environments:

- Urban canyons
- Car, stationary
- Car in motion
- Parking garages
- Grocery stores
- Parks
- Beneath dense foliage
- Open fields

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Network-based Solutions – Not Feasible

- Do not meet accuracy requirements
- Long deployment schedule for LMUs, antennas...
- Unreasonable costs

Out of all location technologies tested

- Best 67% accuracy – 76m, handset-based solution
- Other technologies: 67% accuracy -- 127 to 256m range
95% accuracy – 1200m or greater

Cingular concluded that based on analysis of field trial data, no location technology meets the FCC's accuracy mandate for all environments tested.

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Switch-based location technology

- Signal strength measurements from serving cell and neighboring cells.
- Network provides measurements for software algorithm to compare with database of real world signal strength measurements and determine location of handset.

Major Advantages of Switch-based location technology --

Speed of deployment and cost

Location accuracy will improve due to vendor software refinements

Deployment Schedule

- Secure vendor for algorithm solution
- Upon waiver grant, database development, real-world signal strength measurements
- June 30, 2002, 100 percent of Cingular's coverage area served by an Ericsson switch or within 6 months of PSAP request, whichever is later; and
- February 28, 2003, 100 percent of Cingular's coverage area served by all other switches (Lucent and Nortel), or within 6 months of a PSAP request, whichever is later.

Deployment Schedule shown above is dependent upon the required switch software upgrades which are necessary to interface with vendor equipment providing algorithm solution.